

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. **(currently amended)** A method for producing a fused silica glass containing titania, comprising:

synthesizing particles of silica and titania by delivering a mixture of a silica precursor and a titania precursor to a burner;

growing a column of solid porous preform by successively depositing the particles on a deposition surface at a temperature below a minimum temperature at which the particles can consolidate either partially or fully into dense glass while ~~rotating and~~ successively translating the deposition surface ~~relative to~~ away from the burner; and

subsequently consolidating the porous preform into dense glass.

2. **(previously presented)** The method of claim 1, wherein a translation speed of the deposition surface is adjusted to maintain a substantially constant distance between an end portion of the porous preform remote from the deposition surface and the burner during deposition.

3. **(canceled)**

4. **(previously presented)** The method of claim 1, wherein consolidating the porous preform into dense glass comprises heating the porous preform to a temperature in a range from 1200 to 1900°C.

5. **(original)** The method of claim 1, further comprising dehydrating the porous preform by exposing the porous preform to a heated, halide-containing atmosphere prior to consolidation.

6. **(original)** The method of claim 5, wherein the heated, halide-containing atmosphere comprises chlorine.

7. **(original)** The method of claim 5, wherein the heated, halide-containing atmosphere comprises fluorine.

8. **(original)** The method of claim 5, wherein the temperature of the heated, halide-containing atmosphere is in a range from 900 to 1100°C.

9. **(original)** The method of claim 1, wherein the glass contains 2 to 12% by weight titania.

10-12. **(canceled)**

13. **(previously presented)** The method of claim 5, wherein a translation speed of the deposition surface is adjusted to maintain a substantially constant distance between an end portion of the porous preform remote from the deposition surface and the burner during deposition.

14. **(canceled)**

15. **(previously presented)** The method of claim 5, wherein consolidating the porous preform into dense glass comprises heating the porous preform to a temperature in a range from 1200 to 1900°C.

16-19. **(canceled)**

20. **(original)** The method of claim 1, wherein the minimum temperature is approximately 1200°C.

21. **(original)** The method of claim 20, wherein the temperature at which the particles are deposited is approximately 200 to 500°C less than the minimum temperature.
22. **(canceled)**
23. **(original)** The method of claim 1, wherein a variation in coefficient of thermal expansion of the dense glass is in a range from -5 ppb/°C to +5 ppb/°C.
24. **(new)** The method of claim 1, further comprising rotating the deposition surface relative to the burner while successively depositing the particles on the deposition surface.